

7) The machine in claim 1 wherein said rotating brushes electrically contact the outer flat or conical surface of the stationary commutator and slip rings arranged in a concentric pattern such that centrifugal forces acting on said brushes forces them in an outward direction parallel to the plane of rotation and perpendicular to the point of contact between said commutator and brushes.

Abstract of Disclosure

[0004] The Stationary Armature Machine (SAM) is comprised a stationary armature and similar to Brushless DC motor's stator, and a stationary commutator affixed to the frame or housing for increased heat abatement and a rotating field and brushes affixed to a common shaft as a means for mechanical commutation. SAM unique stationary armature increases current carrying capacity and heat abatement at low voltages and high rotating speed without increasing overall physical size relative to BLDC motors. SAM's armature and field structure are arranged in reverse having the armature in a stationary position with a commutation assembly affixed to the machine's housing while said field structure (and brush assembly) rotate at the center of the machine. By making the armature and commutator assembly stationary, the current carrying conductors can be made much larger without being subjected to extreme centrifugal forces at high rotating velocities. SAM is ideally suited for applications that require lots of torque, power at high rotational speeds in a small inexpensive package.

Figures